

PROGRESS REPORT NO. 7

COLOR IMAGE ASSESSMENT

PROJECT 6619

Period: May 1 through May 31, 1969

Declass Review by NIMA/DOD

COLOR IMAGE ASSESSMENTPROGRESS DURING THE PERIOD

The complete set of edge traces were received from the customer. All traces were performed as directed and are currently being processed to obtain MTF information for the SO 151 emulsion. The direction cosine program was utilized to gain dye layer information on the SO 155 emulsion. It appears that the SO 155 dye image is not angularly stable at low dye concentration. Beer's law appears to hold for visual diffuse densities above .7. The asymptotic angles resulting from the direction cosine plot for SO 155-16-32 are as follows:

emulsion: 0-155-16-32

YC	69°
YM	51°
CM	62°

Extensive investigation into the VECTOR routine and SEIGEN selective exposure generation routine has succeeded in bringing to light the sources of errors to which the regeneration routine is presently subject.

Computing the characteristic vectors from a neutral and mean corrected variance-covariance matrix increases the number of vectors required to account for 99% of trace but also appears to reduce regeneration errors. The tables used in the test case were also corrected for a fixed exposure cut-off as follows:

Fixed Exposure Cut-Off Points for Analytical Exposure Tables

EXPOSURE TABLE		Log E _{cut-off}
Yellow	toe	2.85
	shoulder	0.30
Magenta	toe	2.67
	shoulder	0.25

Cyan	toe	2.81
	shoulder	0.46

The final report is progressing well in the draft form even though not all experimental work is completed. The final report is now 60% completed.

WORK PLANNED FOR NEXT PERIOD

Major work to be completed is the generation and testing of an MTF routine for analytical edges. This will be accomplished using the edge traces on SO 151 recently received from the customer.

STATINTLA meeting between [] and the customer's personnel is planned for 30 June, 1969 at which time the rough draft copy of the final report will be delivered.